## **CLAIMS**

1. A compound of formula (I) or a pharmaceutically acceptable derivative thereof:

$$(R^{1})_{m} \qquad (CH_{2})_{t} \xrightarrow{H} (H^{2})_{n}$$

$$(CH_{2})_{t} \xrightarrow{H} (H^{2})_{n} \downarrow H$$

$$(H^{2})_{n} \downarrow H$$

$$(H^{2})_{n} \downarrow H$$

$$(H^{2})_{n} \downarrow H$$

$$(H^{3})_{p} \downarrow H$$

wherein

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A, B and D are independently aryl or heteroaryl;

R<sup>1</sup>, R<sup>2</sup> and R<sup>3</sup> are independently C<sub>1-6</sub>alkyl, halogen, C<sub>1-6</sub>alkoxy, hydroxy, cyano, CF<sub>3</sub>, OCF<sub>3</sub>, nitro, C<sub>1-6</sub>alkylthio, amino, mono- or di-C<sub>1-6</sub>alkylamino, carboxy, C<sub>1-6</sub>alkanoyl, amido, mono or di-C<sub>1-6</sub>alkyl amido, -NHCOR<sup>9</sup> or -NHSO<sub>2</sub>R<sup>9</sup> {in which R<sup>9</sup> is C<sub>1-6</sub>alkyl, C<sub>3-7</sub>cycloalkyl or phenyl (optionally substituted by up to three groups selected from C<sub>1-6</sub>alkyl, halogen, C<sub>1-6</sub>alkoxy, cyano, phenyl and CF<sub>3</sub>)} or is a group -E-(CH<sub>2</sub>)<sub>1-6</sub>NR<sup>X</sup>R<sup>y</sup> (in which E is a single bond or -OCH<sub>2</sub>- and R<sup>X</sup> and R<sup>y</sup> are independently hydrogen, C<sub>1-6</sub>alkyl or combine together to form a 5 - 7 membered heterocyclic ring);

 $R^4$  and  $R^{4'}$  are independently hydrogen,  $C_{1-6}$ alkyl, halogen or  $C_{1-6}$ alkoxy;

V is O, S, NH, N-C<sub>1-6</sub>alkyl, NNO<sub>2</sub> or NCN;

W, X, Y and Z are independently C, CH or N, subject to the proviso that at least one of X, Y and Z is N;

- 20 L is  $-(CH_2)q^-$  or  $-(CH_2)q^-$ O- where q is 0, 1, 2 or 3 and q' is 2 or 3;
  - J is (i) a group  $CR^5 = CR^6$  where  $R^5$  and  $R^6$  are independently hydrogen or  $C_{1-6}$ alkyl;
    - (ii) a group -CHR<sup>7</sup>-CHR<sup>8</sup>- where R<sup>7</sup> and R<sup>8</sup> are independently hydrogen, C<sub>1-6</sub>alkyl, C<sub>3-7</sub>cycloalkyl, aryl, heteroaryl, a group -NHCOR<sup>9</sup> or -NHSO<sub>2</sub>R<sup>9</sup> in which R<sup>9</sup> is as defined above or a group -(CH<sub>2</sub>)<sub>1-6</sub>NR<sup>x</sup>R<sup>y</sup> in which R<sup>x</sup> and R<sup>y</sup> are as defined above;
      - (iii) a single bond;

- (iv) -CHR6- where R6 is as defined above; or
- (v) a group -O-CHR<sup>10</sup>-, -NR<sup>11</sup>-CHR<sup>10</sup>- or -CR<sup>12</sup>R<sup>13</sup>-CHR<sup>10</sup>- where R<sup>10</sup> and R<sup>11</sup> are independently hydrogen or  $C_{1-6}$ alkyl and R<sup>12</sup> and R<sup>13</sup> are independently  $C_{1-6}$ alkyl or R<sup>12</sup> and R<sup>13</sup> combine together to form a  $C_{3-7}$ cycloalkyl or a 5 7 membered heterocyclic ring;

m, n and p are independently 0, 1, 2 or 3; and t is 0, 1 or 2.

2. The compound according to claim 1, wherein the compound is of formula (l') or a pharmaceutically acceptable derivative thereof:

$$(R^{1})_{m}$$

$$(CH_{2})_{t}$$

$$(CH_{2})_{t}$$

$$(CH_{2})_{t}$$

$$(CH_{2})_{t}$$

$$(H_{2})_{t}$$

$$(H_{2})_{t$$

in which R<sup>1</sup> - R<sup>4</sup>, m, n, p, t, A, B, D, L, J, V, W, X, Y and Z are as defined in formula (I).

- 3. The compound according to claim 1 or 2, wherein A is phenyl or pyridyl.
- 4. The compound according to any of the preceding claims, wherein B is phenyl.
- 20 5. The compound according to any of the preceding claims, wherein D is phenyl or pyridyl.
  - 6. The compound according to claim 1, wherein the compound is of formula (la) or a pharmaceutically acceptable derivative thereof:

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$$(R^{1})_{m}$$

$$(CH_{2})_{t}$$

$$(CH_{2})_{t}$$

$$(R^{3})_{p}$$

in which:

R1 - R4, R4', L, J, X, Y, Z, m, n, p and t are as defined in formula (I).

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7. The compound according to claim 6, wherein the compound is of formula (la') or a pharmaceutically acceptable derivative thereof:

$$(R^{1})_{m}$$

$$(CH_{2})_{t}$$

$$(R^{2})_{n}$$

$$(R^{3})_{p}$$

$$(Ia')$$

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in which:

R<sup>1</sup> - R<sup>4</sup>, L, J, X, Y, Z, m, n, p and t are as defined in formula (I).

8. The compound according to any of the preceding claims in which R<sup>1</sup>, R<sup>2</sup> and R<sup>3</sup> are, independently, selected from the group consisting of C<sub>1-6</sub>alkyl, halogen, C<sub>1-6</sub>alkoxy, cyano and CF<sub>3</sub>.

- 9. The compound according to any of the preceding claims in which J is selected from the group consisting of -CH = CH-, -(CH<sub>2</sub>)<sub>2</sub>- and -CHR<sup>7</sup>-CH<sub>2</sub>- in which R<sup>7</sup> is C<sub>1-6</sub>alkyl.
- 5 10. The compound according to any of the preceding claims in which L is -(CH<sub>2</sub>)<sub>q</sub>-where q is 0, 1, 2 or 3.

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- 11. The compound according to claim 1 which is selected from the group consisting of E1 E18 or a pharmaceutically acceptable derivative thereof
- 12. A process for the preparation of the compound of formula (I) or a pharmaceutically acceptable derivative thereof which comprises hydrolysis of a carboxylic acid ester derivative of formula (II):

$$(R^{1})_{m}$$

$$(CH_{2})_{t}$$

$$(CH_{2})_{t}$$

$$(H)$$

$$(R^{2})_{n}$$

$$(R^{3})_{p}$$

$$(R^{3})_{p}$$

$$(H)$$

in which  $R^1$  -  $R^4$ ,  $R^4$ , m, n, p, t, A, B, D, L, J, V, W, X, Y and Z are as defined in formula (I) and R is a group capable of forming a carboxylic acid ester and optionally thereafter forming a pharmaceutically acceptable derivative thereof.

- 13. The compound according to any one of claims 1 to 11 for use in therapy.
- 14. A pharmaceutical composition which comprises a therapeutically effective amount of the compound according to any one of claims 1 to 11 in admixture with a
   25 pharmaceutically acceptable carrier or diluent.

- 15. A pharmaceutical composition comprising the compound according to any one of claims 1 11 together with another therapeutically active agent.
- 16. A use of the compound according to any one of claims 1 to 11 in the manufacture of a medicament for the treatment or prevention of conditions in which an inhibitor of  $\alpha_4$  integrin mediated cell adhesion is beneficial.

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- 17. A method for the treatment or prevention of conditions in which an inhibitor of  $\alpha_4$  integrin mediated cell adhesion is beneficial which comprises administering to a patient in need thereof a safe and effective amount of the compound according to any one of claims 1 to 11.
- 18. The method according to claim 17, wherein said condition is selected from the group consisting of rheumatoid arthritis (RA); asthma; allergic conditions such as rhinitis; adult respiratory distress syndrome; AIDS-dementia; Alzheimer's disease; cardiovascular diseases; thrombosis or harmful platelet aggregation; reocclusion following thrombolysis; reperfusion injury; skin inflammatory diseases such as psoriasis, eczema, contact dermatitis and atopic dematitis; diabetes (e.g., insulin-dependent diabetes mellitus, autoimmune diabetes); multiple sclerosis; systemic lupus erythematosus (SLE); inflammatory bowel disease such as ulcerative colitis, Crohn's disease (regional enteritis) and pouchitis (for example, resulting after proctocolectomy and ileoanal anastomosis); diseases associated with leukocyte infiltration to the gastrointestinal tract such as Celiac disease, nontropical Sprue, enteropathy associated with seronegative arthropathies, lymphocytic or collagenous colitis, and eosinophilic gastroenteritis; diseases associated with leukocyte infiltration to other epithelial lined tissues, such as skin, urinary tract, respiratory airway, and joint synovium; pancreatitis; mastitis (mammary gland); hepatitis; cholecystitis; cholangitis or pericholangitis (bile duct and surrounding tissue of the liver); bronchitis; sinusitis; inflammatory diseases of the lung which result in interstitial fibrosis, such as hypersensitivity pneumonitis; collagen disease (in SLE and RA); sarcoidosis; osteoporosis; osteoarthritis; atherosclerosis; neoplastic diseases including metastasis of neoplastic or cancerous growth; wound healing enhancement; certain eye diseases such as retinal detachment, allergic conjunctivitis and autoimmune uveitis; Sjogren's syndrome; rejection (chronic and acute) after organ transplantation; host vs. graft or graft vs. host

diseases; intimal hyperplasia; arteriosclerosis (including graft arteriosclerosis after transplantation); reinfarction or restenosis after surgery such as percutaneous transluminal coronary angioplasty (PTCA) and percutaneous transluminal artery recanalization; nephritis; tumor angiogenesis; malignant tumor; multiple myeloma and myeloma-induced bone resorption; sepsis; and central nervous system injury such as stroke, traumatic brain injury and spinal cord injury and Meniere's disease.

- 19. The method according to claim 17, wherein said condition is asthma, allergic conditions, inflammatory bowel disease, rheumatoid arthritis, atopic dermatitis, multiple sclerosis or rejection after organ transplantation.
- 20. A compound of formula (II):

$$(R^{1})_{m} \qquad (CH_{2})_{t} \qquad (R^{2})_{n}$$

$$(CH_{2})_{t} \qquad (CH_{2})_{t} \qquad (R^{3})_{p}$$

$$(CH_{2})_{t} \qquad (CH_{2})_{t} \qquad (R^{3})_{p}$$

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**(II)** 

in which  $R^1$  -  $R^4$ ,  $R^4$ , m, n, p, t, A, B, D, L, J, V, W, X, Y and Z are as defined in formula (I) and R is a group capable of forming a carboxylic acid ester.